

*Jpn. J. Ent.*, 61 (4): 803–810. December 25, 1993

## Two New Species of the Genus *Eusphalerum* (Coleoptera, Staphylinidae) from Amami-ôshima of the Ryukyu Islands, Japan

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**Abstract** Two new species belonging to the staphylinid genus *Eusphalerum* are described and illustrated under the names of *E. (E.) amamiense* and *E. (E.) kana*. They were found on flowers in Amami-ôshima of the Ryukyu Islands, Japan.

**Key words:** Coleoptera; Staphylinidae; *Eusphalerum*; new species; Japan.

Up to the present, forty staphylinid species belonging to the genus *Eusphalerum* have been described or reported from Japan by SHARP (1874, 1889), FAUVEL (1901), BERNHAUER (1909), CAMERON (1930), CHÛJÔ and LAST (1958), and WATANABE (1990). However, none have hitherto been recorded from the Ryukyu Islands.

Recently, I had an opportunity to examine two species of the genus found on flowers in Amami-ôshima Island of the Ryukyus. After a close examination, it has become clear that they should belong to the group of *Eusphalerum* (*Eusphalerum*) *pollens* (SHARP) for reason of the glabrous elytra. They seem to be new to science and will be described in the present paper. The type series of the two new species to be described are preserved in the collection of the Laboratory of Entomology, Tokyo University of Agriculture.

Before going further, I wish to express my hearty thanks to Dr. Shun-Ichi UÉNO of the National Science Museum (Nat. Hist.), Tokyo, for his kind advice on the present study. Deep gratitude is also due to Messrs. T. KISHIMOTO, K. MATSUMOTO, Y. OKUSHIMA, T. UENO and Miss S. NIRASAWA for their kindness in providing me with the specimens used in this study.

*Eusphalerum* (*Eusphalerum*) *amamiense* Y. WATANABE, sp. nov.

[Japanese name: Amami-hanamuguri-hanekakushi]

(Figs. 1–2, 4–5)

Body length: 2.0–2.8 mm (from front margin of head to anal end); 1.6–2.1 mm (from front margin of head to elytral apices).

Though the present new species may be placed near *E. (E.) solitare* (SHARP) by reason that the pronotum is well convex and closely covered with distinct punctures,

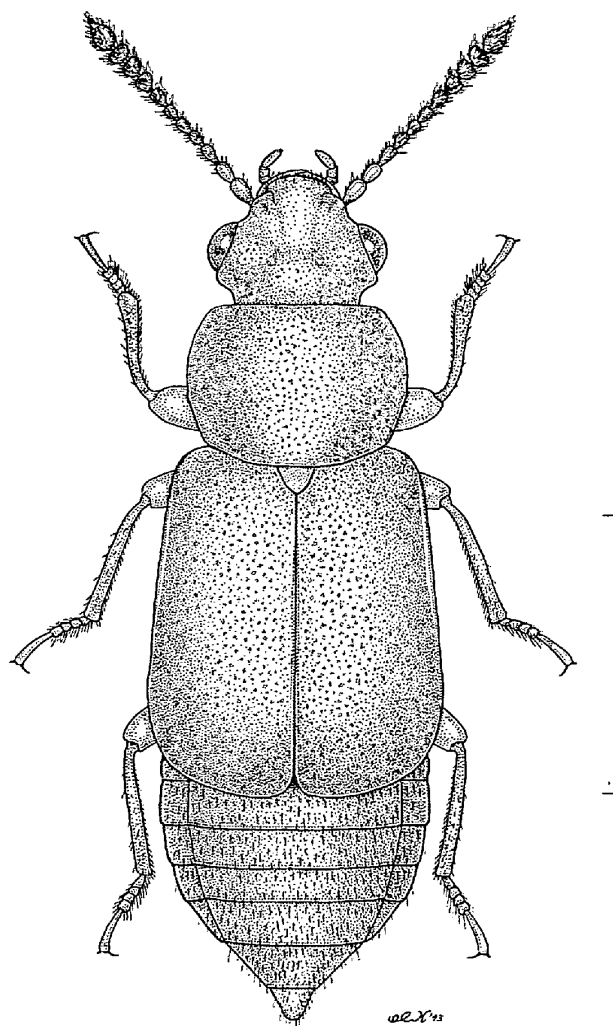
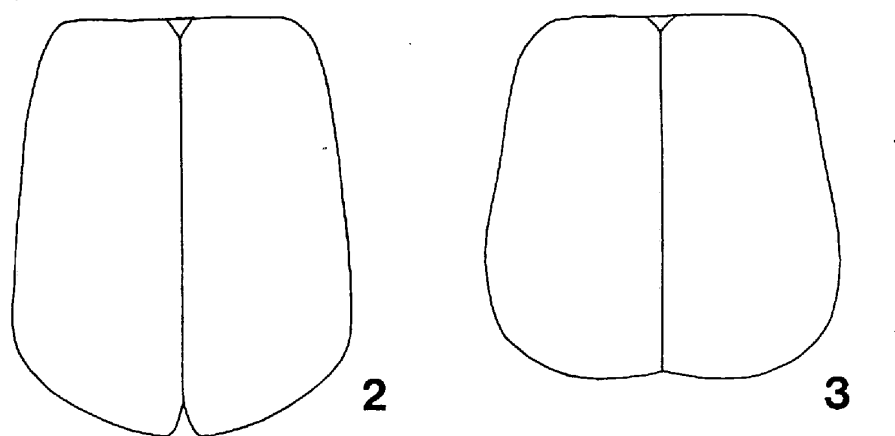


Fig. 1. *Eusphalerum (Eusphalerum) amamiense* Y. WATANABE, sp. nov., ♂. Scale: 1.0 mm

it can be distinguished from the latter by the following points: the pronotum is more densely and more finely punctured; the elytra are much longer than those of *E. (E.) solitare*, with the posterior margin arcuate in the female; the abdomen is reddish yellow in the female; the median lobe of male genital organ is much narrower in the apical part than that of *E. (E.) solitare*.

*Male.* Body long-oval and convex. Colour yellowish red and moderately shining, with mouth parts, five or six proximal antennal segments, elytra and legs yellowish, four or five apical antennal segments reddish brown, abdomen black with the exception of yellowish two terminal segments.

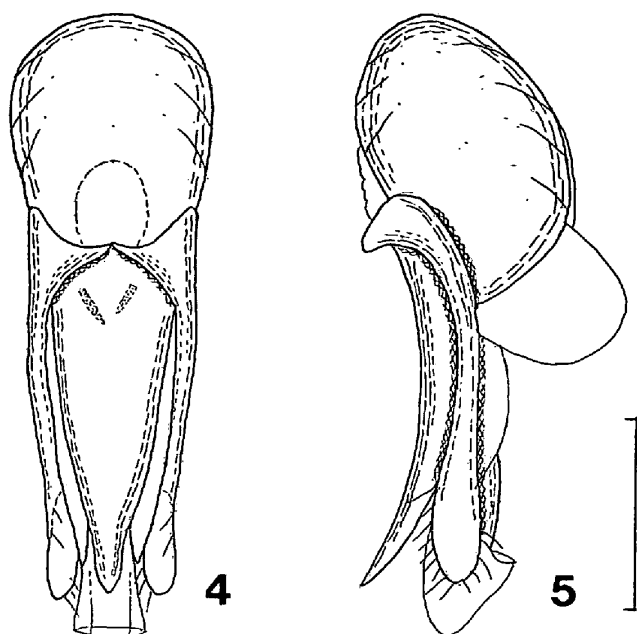
Head subtrapezoidal and depressed above, apparently broader across compound eyes than long (width/length=1.56); postocular part short, nearly one-fourth as long as the longitudinal diameter of each eye; surface sparingly and finely punctured and covered with fine coriaceous ground sculpture, provided with a depression



Figs. 2-3. Female elytra. — 2, *E. (E.) amamiense* Y. WATANABE, sp. nov.; 3, *E. (E.) solitaire* (SHARP). Scale: 0.3 mm

just inside each antennal tubercle and also with a small shallow depression in front of each ocellus; ocelli minute, the distance between them being slightly larger than that from the outer side of ocellus to the inner margin of each eye. Antennae somewhat thickened towards the extremities and relatively short, not reaching posterior margin of pronotum, with five proximal segments polished, 6th segment subopaque and the remainings opaque, 1st segment robust and about 1.5 times as long as broad, 2nd a little longer than broad (length/width=1.36), though shorter (2nd/1st=0.67) and narrower (2nd/1st=0.73) than 1st, 3rd somewhat dilated apicad and about twice as long as broad, a little longer (3rd/2nd=1.33) though slightly narrower (3rd/2nd=0.91) than 2nd, 4th somewhat longer than broad (length/width=1.25), though apparently shorter than 3rd (4th/3rd=0.63), 5th to 8th subequal in length to one another, 5th to 7th each longer than broad, 8th almost as long as broad, 9th and 10th subequal in length to each other, 9th slightly broader than long (width/length=1.07) though slightly longer (9th/8th=1.07) and a little broader (9th/8th=1.14) than 8th, 10th transverse (width/length=1.17) and slightly broader than 9th (10th/9th=1.09), apicalmost semioval, evidently longer than broad (length/width=1.32) and more than 1.5 times as long as 10th, obtusely pointed at the apex.

Pronotum convex and subtrapezoidal, transverse (width/length=1.38) and evidently broader than head (pronotum/head=1.32), widest near the middle and more strongly narrowed posteriad than anterior; lateral margins finely bordered, each gently arcuate in anterior two-thirds and straight or slightly emarginate in posterior third, anterior margin feebly arcuate, posterior margin as finely bordered as lateral margins and feebly bisinuate, anterior angles rounded and posterior ones obtuse; surface finely and much more closely punctured than on head and covered with coriaceous ground sculpture as on head, provided with a longitudinal depression in posterior half just inside each lateral margin and sometimes with an obsolete longitudinal depression in anterior half along the median line. Scutellum



Figs. 4-5. Male genital organ of *E. (E.) amamiense* Y. WATANABE, sp. nov. — 4, Ventral view; 5, lateral view. Scale: 0.2 mm

small and subtriangular, impunctate though covered with fine coriaceous ground sculpture on the surface. Elytra gently convex and somewhat dilated apicad, distinctly longer than broad (length/width=1.22), somewhat broader (elytra/pronotum=1.24) and more than twice as long as pronotum; lateral margins each almost straight, posterior margin somewhat arcuate; surface densely and coarsely punctured. Legs moderately long, 1st to 4th segments of protarsus not so widened, apical segment of metatarsus slightly longer than the four preceding segments together.

Abdomen narrowed towards the apical end; surface of each tergite sparsely and very obsoletely punctured and covered with fine coriaceous ground sculpture; preapical sternite semicircularly emarginate at the middle of posterior margin.

Genital organ trilobed and symmetrical. Median lobe gradually narrowed apicad in basal two-thirds and abruptly tapered in apical third towards the apex, which is bluntly pointed. Parameres elongate and almost as long as median lobe, each somewhat dilated in apical part, which is membraneous and sparsely fringed with fine setae.

*Female.* Similar in general appearance to male, though differs from it in the following details: elytra more strongly produced posteriad at the middle; 1st to 4th protarsal segments thin; abdomen reddish yellow, with preapical sternite produced posteriad at the median part of posterior margin and subtruncated at the tip.

*Type series.* Holotype: ♂, allotype: ♀, Mt. Yuwan-dake, Ukenson, Amami-ôshima Is., Ryukyus, Japan, 9-III-1993, K. MATSUMOTO leg. Paratypes: 8 ♂♂,

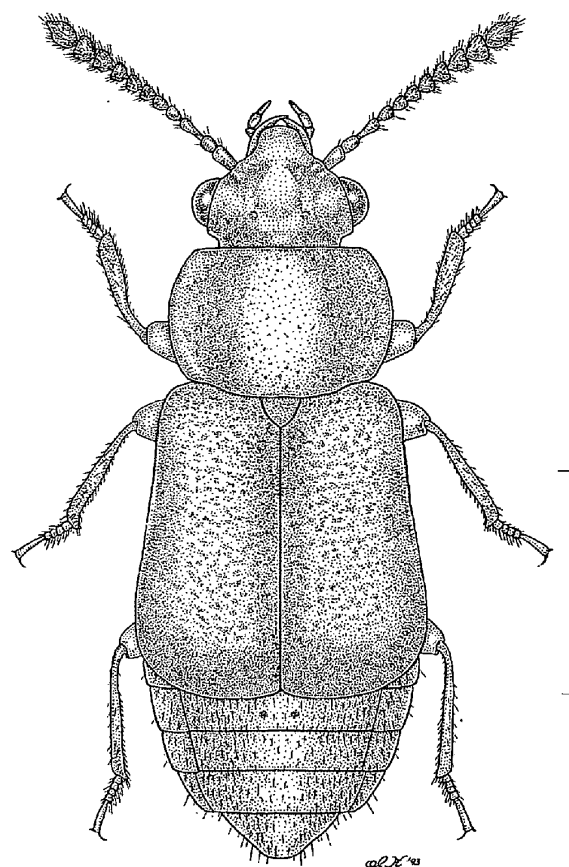


Fig. 6. *Eusphalerum (Eusphalerum) kana* Y. WATANABE, sp. nov., ♂. Scale: 0.5 mm

3 ♀♀, same data as for the holotype; 3 ♂♂, 4 ♀♀, same locality and collector as for the holotype, 6-III-1993; 1 ♂, 3 ♀♀, same locality as for the holotype, 3-III-1993, S. NIRASAWA leg.; 1 ♂, Chûô-rindô, Amami-ôshima Is., Ryukyus, Japan, 26-III-1990, Y. OKUSHIMA leg.; 19 ♂♂, 9 ♀♀, same locality as for the holotype, 2-IV-1991, T. UENO leg.

*Distribution.* Ryukyus (Amami-ôshima Is.).

*Notes.* A large number of specimens of this new species were found on the flowers of *Rhododendron* sp..

***Eusphalerum (Eusphalerum) kana* Y. WATANABE, sp. nov.**

[Japanese name: Amami-hime-hanamuguri-hanekakushi]

(Figs. 6-8)

Body length: 1.3-1.8 mm (from front margin of head to anal end); 1.0-1.2 mm (from front margin of head to elytral apices).

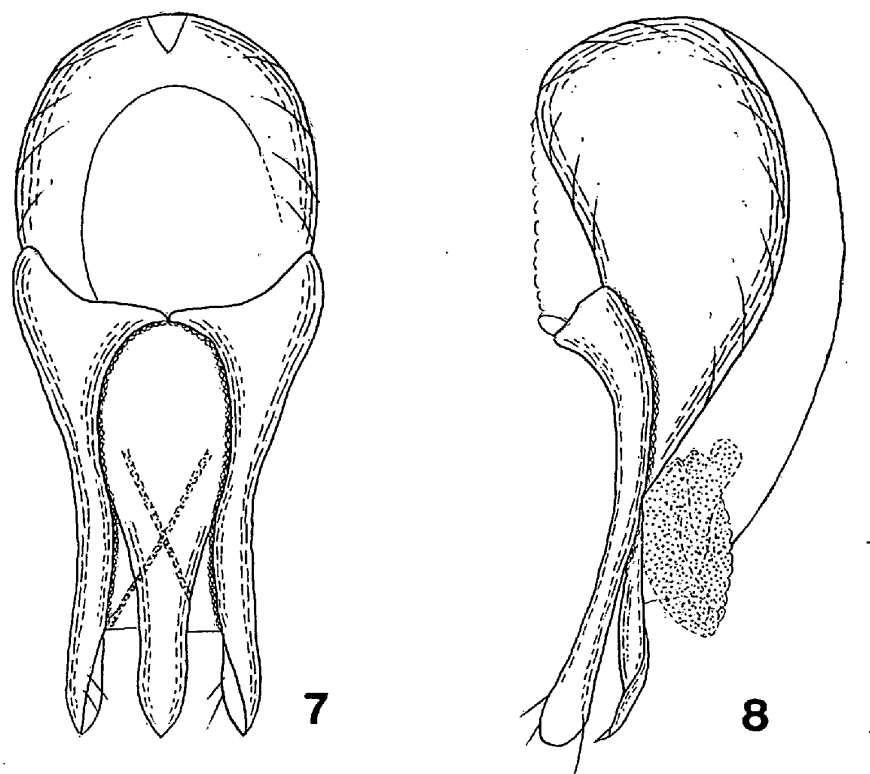
In facies and body size this species resembles *E. (E.) lewisi*, but is separable from it by the following points: head more coarsely punctured on the surface; pro-

notum less convex and more or less flattened on the disc, more strongly narrowed posteriad, with lateral margins more strongly arcuate and surface more distinctly punctured; elytra less long; median lobe of male genital organ not so strongly curved ventrad in profile.

*Male.* Body long-oval and moderately convex. Colour reddish yellow and moderately shining, with mouth parts, six proximal antennal segments and legs yellowish, five apical antennal segments reddish brown, and abdomen blackish.

Head subtrapezoidal and depressed above, considerably broader across compound eyes than long (width/length=1.70); postocular parts very short, less than one-fifth as long as the longitudinal diameter of each eye which is prominent; surface sparsely scattered with coarse punctures and covered with fine coriaceous ground sculpture, provided with a shallow depression inside each antennal tubercle and also with a short longitudinal depression in front of each ocellus, which is sometimes indistinct; ocelli minute, the distance between them being distinctly larger than that from the outer side of ocellus to the inner margin of each eye. Antennae moderately elongate, not or hardly reaching posterior margin of pronotum, thickened towards apical segment, with five proximal segments polished, 6th segment sub-opaque and the remainings opaque, 1st segment robust, about 1.5 times as long as broad, 2nd a little longer than broad (length/width=1.11), though only two-thirds as long as and somewhat narrower (2nd/1st=0.90) than 1st, 3rd elongate and dilated apicad, about twice as long as broad, a little longer (3rd/2nd=1.25) but distinctly narrower (3rd/2nd=0.67) than 2nd, 4th to 9th subequal in length to one another, 4th and 5th slightly longer than broad, 6th as long as broad, 7th to 10th gradually increasing in width, 7th slightly broader than long (width/length=1.11), 10th distinctly transverse (width/length=1.40), apicalmost semioval, apparently longer than broad (length/width=1.33) and twice as long as 10th, bluntly pointed at the apex.

Pronotum moderately convex, though more or less flattened on the disc, subtrapezoidal and strongly transverse (width/length=1.41), apparently broader than head (pronotum/head=1.29), widest just before the middle, and more strongly narrowed posteriad than anterior; lateral margins finely bordered, gently arcuate in anterior halves and almost straight in posterior halves, anterior margin nearly straight, posterior margin feebly rounded, anterior angles rounded, posterior ones obtuse; surface somewhat sparsely scattered with fine punctures and covered with more distinct coriaceous ground sculpture than those on head, bearing a vague depression in posterior half inside each lateral margin. Scutellum subtriangular, impunctate though covered with extremely fine coriaceous ground sculpture on the surface. Elytra moderately convex and dilated posteriad, somewhat longer than broad (length/width=1.09), nearly twice as long as and evidently broader (elytra/pronotum=1.25) than pronotum, lateral and posterior margins each almost straight; surface densely covered with coarse punctures. Legs moderately long; 1st to 4th segments of protarsus not so dilated, apical segment of metatarsus somewhat longer



Figs. 7–8. Male genital organ of *E. (E.) kana* Y. WATANABE, sp. nov. — 7, Ventral view; 8, lateral view. Scale: 0.1 mm

than the four preceding segments together.

Abdomen narrowed towards the apical end; surface of each tergite sparingly scattered with very obsolete punctures and covered with microscopic ground sculpture; preapical sternite semicircularly emarginate at the middle of posterior margin.

Genital organ trilobed and symmetrical. Median lobe abruptly narrowed apicad in basal half and nearly parallel-sided in apical half except for the apical part which is abruptly narrowed towards the tip. Parameres rather stout and as long as median lobe, each slightly dilated in the apical part, which is membraneous at the inner side and fringed with a few setae.

*Female.* Facies as in male, though the 1st to 4th protarsal segments are thin; abdomen yellowish brown, with preapical sternite produced backwards at the median part of posterior margin and subtruncated at the tip.

*Type series.* Holotype: ♂, allotype: ♀, Asato-tôge, Naze City, Amami-ôshima Is., Ryukyus, Japan, 7–IV–1991, T. UENO leg. Paratypes: 4 ♂♂, 2 ♀♀, same data as for the holotype; 4 ♂♂, 5 ♀♀, Naze, Amami-ôshima Is., Ryukyus, Japan, 27–III–1991, Y. OKUSHIMA leg.; 3 ♂♂, 1 ♀, Mt. Yuwan-dake, Uken-son, Amami-ôshima Is., Ryukyus, Japan, 2–IV–1991, T. UENO leg.; 1 ♀, same locality as for the holotype, 29–IV–1992, T. KISHIMOTO leg.

*Distribution.* Ryukyu Islands (Amami-ôshima Is.).

*Notes.* All the specimens of the type series were found on the flowers of *Litsea citriodora*.

### Key to the Species of the Genus *Eusphalerum* Occurring in Amami-ôshima Island

1. Body more than 2.0 mm in length; pronotum well convex, densely and distinctly punctured all over; elytra more than twice as long as pronotum, with the posterior margin arcuate in female; median lobe of male genital organ gradually narrowed apicad in basal two-thirds. ....  
..... *E. (E.) amamiense* Y. WATANABE, sp. nov.
- Body less than 2.0 mm in length; pronotum medially convex though more or less flattened on the disc; elytra nearly twice as long as pronotum, with the posterior margin almost straight in both sexes; median lobe of male genital organ abruptly narrowed apicad in basal half and nearly parallel-sided in apical half. .... *E. (E.) kana* Y. WATANABE, sp. nov.

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(Received June 23, 1993; Accepted July 27, 1993)